

In the Claims:

- 1 1. (Previously presented) A diamond tool fabricated with a
2 single crystal diamond artificially synthesized under high
3 pressure in a temperature difference method, characterized
4 in that said diamond has a crystal containing an impurity
5 in an amount of at most 3 ppm and the tool has a blade with
6 an end having a plane orientation being a (110) plane.

- 1 2. (Original) The diamond tool according to claim 1, wherein
2 said crystal contains said impurity in an amount of at most
3 0.1 ppm.

- 1 3. (Original) The diamond tool according to claim 1, being one
2 of an ultra high precision cutting tool, a microtome knife,
3 a diamond knife, a diamond stylus, a line drawing die, and
4 a dresser.

- 1 4. (Currently amended) The diamond tool according to claim 1,
2 wherein a titanium containing, activated brazing material
3 ~~[[+22+]]~~ is employed to attach said diamond to a main body
4 of the tool.

- 1 5. (Previously presented) A diamond tool fabricated with a
2 single crystal diamond artificially synthesized under high
3 pressure in a temperature difference method, characterized
4 in that said diamond has a crystal containing nitrogen in

5 an amount of at most 3 ppm and the tool has a blade with an
6 end having a plane orientation being a (110) plane and said
7 crystal also contains nickel.

1 6. (Original) The diamond tool according to claim 5, wherein
2 said nickel is contained in an amount of at least 0.01 ppm
3 and at most 10 ppm.

1 7. (Currently amended) The diamond tool according to claim 5,
2 wherein a titanium containing, activated brazing material
3 ~~[[+22+]]~~ is employed to attach said diamond to a main body
4 of the tool.

1 8. (Previously presented) A diamond tool fabricated with a
2 single crystal diamond artificially synthesized under high
3 pressure in a temperature difference method, characterized
4 in that said diamond has a crystal containing nitrogen in
5 an amount of at most 3 ppm and the tool has a blade with an
6 end having a plane orientation being a (110) plane and said
7 crystal also contains boron and nickel.

1 9. (Original) The diamond tool according to claim 8, wherein
2 said boron is contained in an amount of at least 0.01 ppm
3 and at most 300 ppm.

1 10. (Original) The diamond tool according to claim 8, wherein
2 said nickel is contained in an amount of at least 0.01 ppm
3 and at most 10 ppm.

- 1 **11.** (Currently amended) The diamond tool according to claim 8,
2 wherein a titanium containing, activated brazing material
3 [[~~(22)~~]] is employed to attach said diamond to a main body
4 of the tool.
- 1 **12.** (Original) A synthetic single crystal diamond synthesized
2 under ultra high pressure at high temperature in a
3 temperature difference method, characterized by having a
4 crystal containing nickel as a substitutional atom.
- 1 **13.** (Original) The synthetic single crystal diamond according
2 to claim 12, wherein said nickel is contained in an amount
3 of at least 0.01 ppm and at most 10 ppm.
- 1 **14.** (Original) The synthetic single crystal diamond according
2 to claim 12, containing nitrogen in an amount of at least
3 0.01 ppm and at most 3 ppm.
- 1 **15.** (Original) The synthetic single crystal diamond according
2 to claim 12, used for a tool.
- 1 **16.** (Currently amended) The synthetic single crystal diamond
2 according to claim 15, wherein a titanium containing,
3 activated brazing material [[~~(22)~~]] is employed to attach
4 the synthetic single crystal diamond to an end [[~~(23)~~]] of
5 said tool.

- 1 17. (Original) The synthetic single crystal diamond according
2 to claim 12, used for jewelry.
- 1 18. (Original) A diamond tool comprising the synthetic single
2 crystal diamond of claim 12.
- 1 19. (Original) Diamond jewelry comprising the synthetic single
2 crystal diamond of claim 12.
- 1 20. (Original) A method of synthesizing a single crystal
2 diamond under ultra high pressure at high temperature in a
3 temperature difference method, characterized by employing
4 a solvent formed of at least one of iron and cobalt, at
5 least 36% by weight of nickel, at least 1% by weight and at
6 most 2% by weight of titanium, and at least 3% by weight
7 and at most 5.5% by weight of graphite.
- 1 21. (Currently amended) The method according to claim 20,
2 wherein a seed face of a seed crystal ~~[[+13+]]~~ is a (100)
3 plane of a crystal of diamond.
- 1 22. (Original) The method according to claim 20, wherein said
2 single crystal diamond is synthesized at $1380 \pm 25^{\circ}\text{C}$.
- 1 23. (Original) The method according to claim 20, wherein said
2 single crystal diamond is synthesized at a rate of at least
3 3.9 mg/hr and at most 4.7 mg/hr.

- 1 **24.** (Original) A synthetic single crystal diamond synthesized
2 under ultra high pressure at high temperature in a
3 temperature difference method, characterized by having a
4 crystal containing boron and nickel as substitutional
5 atoms.
- 1 **25.** (Original) The synthetic single crystal diamond according
2 to claim 24, wherein said boron is contained in an amount
3 of at least 1 ppm and at most 300 ppm.
- 1 **26.** (Original) The synthetic single crystal diamond according
2 to claim 24, wherein said nickel is contained in an amount
3 of at least 0.01 ppm and at most 10 ppm.
- 1 **27.** (Original) The synthetic single crystal diamond according
2 to claim 24, containing nitrogen in an amount of at most 3
3 ppm.
- 1 **28.** (Original) The synthetic single crystal diamond according
2 to claim 24, used for a tool.
- 1 **29.** (Currently amended) The synthetic single crystal diamond
2 according to claim 28, wherein a titanium containing,
3 activated brazing material ~~[[+22+]]~~ is employed to attach
4 the synthetic single crystal diamond to an end ~~[[+23+]]~~ of
5 said tool.

- 1 **30.** (Original) The synthetic single crystal diamond according
2 to claim 24, used for jewelry.
- 1 **31.** (Original) A diamond tool comprising the synthetic single
2 crystal diamond of claim 24.
- 1 **32.** (Original) Diamond jewelry comprising the synthetic single
2 crystal diamond of claim 24.
- 1 **33.** (Original) A method of synthesizing a single crystal
2 diamond under ultra high pressure at high temperature in a
3 temperature difference method, characterized by employing
4 a solvent formed of at least one of iron and cobalt, at
5 least 36% by weight of nickel, at least 1% by weight and at
6 most 2% by weight of titanium, at least 0.1% by weight and
7 at most 0.2% by weight of boron and at least 3% by weight
8 and at most 5.5% by weight of graphite.
- 1 **34.** (Currently amended) The method according to claim 33,
2 wherein a seed face of a seed crystal ~~[[+13+]]~~ is a (100)
3 plane of a crystal of diamond.
- 1 **35.** (Original) The method according to claim 33, wherein said
2 single crystal diamond is synthesized at $1350 \pm 30^{\circ}\text{C}$.
- 1 **36.** (Original) The method according to claim 33, wherein said
2 single crystal diamond is synthesized at a rate of at least
3 3.1 mg/hr and at most 3.8 mg/hr.